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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/698,762	10/31/2003	Bimal Mehta	MSFT-2748/302029.1	2802
41505 7590 09/23/2009 WOODCOCK WASHBURN LLP (MICROSOFT CORPORATION) CIRA CENTRE, 12TH FLOOR 2929 ARCH STREET PHILADELPHIA, PA 19104-2891				
EXAMINER				
ANYA, CHARLES E				
ART UNIT		PAPER NUMBER		
2194				
MAIL DATE		DELIVERY MODE		
09/23/2009		PAPER		

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/698,762

Applicant(s)

MEHTA ET AL.

Examiner

CHARLES E. ANYA

Art Unit

2194

Period for Reply -- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3/MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 30 July 2009.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-3 and 5-34 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-3 and 5-34 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-8508)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date _____
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____

DETAILED ACTION

1. Claims 1-3 and 5-34 are pending in this application.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. **Claims 1, 2, 5-10, 12-24 and 26-34 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Pat. No. 2003/0093500 A1 to Khodabakhchian et al. in view of U.S. Pat. No. 7,036,045 B2 issued to Broussard et al.**

3. As to claim 1, Khodabakhchian teaches an asynchronous messaging architecture for processing messages, comprising:

a processor operatively coupled to a computer readable storage medium including computer executable instruction (figure 8 page 6 paragraphs 0070-0076) for:

executing an instance of an automated business process ("...process..." page 1 paragraph 0017, page 3 paragraph 0035), the automated business process including response processing code including exception handling code specifying error compensation ("...compensation rules and exception handlers for a specific scenario..." page 2 paragraphs 0024/0025);

executing a program manager configured to manage the instance of the automated business process (Web Service Orchestration Server 102);

the program manager further configured to detect when the instance of the automated business process is waiting for a response to a message ("...suspended until a response..." page 1 paragraph 0017, figure 5 page 4 paragraph 0041), wherein a response indicates a success or failure of the message ("...suspended until a response..." page 1 paragraph 0017, page 3 paragraph 0035, Block 706 page 4 paragraph 0047);

the program manager further configured to store, when the instance is waiting for the response, at least a part of state information associated with the instance in a database and remove the instance from active memory ("...Passivation..." page 3 paragraph 0035, Block 510 page 4 paragraph 0041, "...passivates the states of the process..." page 4 paragraph 0041);

the program manager further configured to determine when the response associated with the instance has been received ("...When the response...is received..." page 3 paragraph 0035, Block 508 page 4 paragraph 0041) and the program manager further configured to restore the instance from the database into memory and pass the instance the message ("...the process is reactivated..." page 3 paragraph 0035, Block 514 page 4 paragraph 0041); and

the instance further configured to process the response using response processing code within the instance ("...Execution of the process..." page 3 paragraph 0035, Block 516 page 4 paragraph 0041).

Khodabakhchian is silent with reference to the instance further configured to process the response using the exception handling code within the instance.

Broussard teaches the instance further configured to process the response using the exception handling code within the instance (figure 4 "...**Within** application logic 50 is a piece of code containing a "try-catch" block 56 to deal with any "Exception e" errors that might occur while "Do some business logic" is executed..." Col. 4 Ln. 52 – 64).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the system of Khodabakhchian with the teaching of Broussard because the teaching of Broussard would improve the system of Khodabakhchian by providing a condition system with a mechanism for signaling and handling unusual conditions, including errors and warnings.

4. As to claim 2, Broussard teaches the architecture of claim 1, wherein the response processing code is a try-catch block ("..."try-catch" block 56..." Col. 4 Ln. 52 – 64).

5. As to claim 5, Khodabakhchian teaches the architecture of claim 1, wherein the response is received on a port defined by the instance (figure 5 page 4 paragraph 0041).

6. As to claim 6, Khodabakhchian teaches the architecture of claim 1, wherein the response is a response indicative of whether or not the message was received by an intended recipient (figure 5 page 4 paragraph 0041).

7. As to claim 7, Khodabakhchian teaches a method for processing a message in an asynchronous architecture, comprising:

determining that a response to a message sent by an instance (process) of software code is to be received (Block 508 page 4 paragraph 0041), wherein the response indicates a success or failure of the message (Block 706 page 4 paragraph 0047);

determining whether the response has been received and, if the response has not been received, storing the instance of the software code in memory, thereby suspending the instance ("...Passivation..." page 3 paragraph 0035, Block 508 page 4 paragraph 0041, Block 510 page 4 paragraph 0041, "...passivates the states of the process..." page 4 paragraph 0041);

receiving the response ("...When the response...is received..." page 3 paragraph 0035, Block 512 page 4 paragraph 0041) and resuming the instance ("...Execution of the process..." page 3 paragraph 0035, Block 514 page 4 paragraph 0041); and

processing the response using response processing code within the instance according to the success or failure of the message ("...Execution of the process..." page 3 paragraph 0035, Block 516 page 4 paragraph 0041), wherein a response processing code having failure handling functionality specifying error compensation

("...compensation rules and exception handlers for a specific scenario..." page 2 paragraphs 0024/0025).

Khodabakhchian does not explicitly teach a response processing code within the instance having failure handling functionality.

Broussard teaches a response processing code within the instance having failure handling functionality (figure 4 "...**Within** application logic 50 is a piece of code containing a "try-catch" block 56 to deal with any "Exception e" errors that might occur while "Do some business logic" is executed..." Col. 4 Ln. 52 – 64).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the system of Khodabakhchian with the teaching of Broussard because the teaching of Broussard would improve the system of Khodabakhchian by providing a condition system with a mechanism for signaling and handling unusual conditions, including errors and warnings.

8. As to claims 8, 22 and 32, see the rejection of claim 2 above.
9. As to claim 9, Broussard teaches the method of claim 8, wherein processing the response comprises determining whether the response indicates a failure and, if so, processing the response using the catch block ("...try-catch" block 56..." Col. 4 Ln. 52 – 64).

10. As to claim 10, Khodabakhian teaches the method of claim 9, further comprising, if the response indicates a success, processing the response by way of the instance of the software code (Block 516 page 4 paragraph 0041).

11. As to claim 12, Khodabakhian teaches the method of claim 7, wherein storing the instance comprises storing the instance in a database and removing the instance from active memory ("...passivates the states of the process...using the stored data associated with the process..." page 3 paragraph 0035, page 4 paragraph 0041, page 6 paragraph 0068).

12. As to claim 13, Khodabakhian teaches the method of claim 12, wherein resuming the instance comprises removing the instance from the database and restoring the instance to active memory ("...passivates the states of the process...using the stored data associated with the process..." page 4 paragraph 0041, page 6 paragraph 0068).

13. As to claims 14 and 34, see the rejection of claim 5 above.

14. As to claim 15, Khodabakhian teaches the method of claim 7, wherein the asynchronous architecture is implemented by way of distributed business process automation software (Web Services 104 page 2 paragraph 0020).

15. As to claim 16, Khodabachian teaches the method of claim 7, wherein the message is to be received by a remote computer (page 3 paragraph 0034).
16. As to claim 17, see the rejection of claims 1 and 2 above.
17. As to claims 18 and 23, see the rejection of claim 9 above.
18. As to claim 19, Khodabachian teaches the method of claim 18, further comprising, if the response is indicative of a success, processing the response within the instance of the automation software and logically after the catch block (Block 516 page 4 paragraph 0041).
19. As to claim 20, see the rejection of claim 14 above.
20. As to claims 21 and 31, see the rejection of claims 1 and 7 respectively.
21. As to claims 24 and 33, see the rejection of claim 19 above.
22. As to claims 26-30, see the rejection of claims 12-16 respectively.
23. As to claim 34, see the rejection of claim 14 above.

24. Claims 3, 11 and 25 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Pat. No. 2003/0093500 A1 to Khodabakhchian et al. in view of U.S. Pat. No. 7,036,045 B2 issued to Broussard et al. as applied to claims 1, 7 and 21 above, and further in view of U.S. Pub. No. 2003/0204835 A1 to Budhiraja et al.

25. As to claim 3, Broussard and Khodabakhchian are silent with reference to the architecture of claim 1, wherein storing the instance takes place after a predetermined time.

Budhiraja teaches the architecture of claim 1, wherein storing the instance takes place after a predetermined time ("...checkpoint..." page 3 paragraphs 0037/0041/0048).

It would have been to one of ordinary skill in the art at the time the invention was made to modify the system of Broussard and Khodabakhchian with the teaching of Budhiraja because the teaching of Budhiraja would improve the system of Broussard and Khodabakhchian by providing a technique for inserting fault tolerance into computing systems which includes storing a snapshot of a current application state, and using it for restarting execution in case of failure.

26. As to claims 11 and 25, see the rejection of claim 3 above.

Response to Arguments

Applicant's arguments with respect to claims 1-3 and 5-34 have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

U.S. Pat. No. 7,370,224 B2 issued to Breitling, Thomas: directed to error handling in business processes.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to CHARLES E. ANYA whose telephone number is (571)272-3757. The examiner can normally be reached on 8:30-5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Hyung Sough can be reached on 571-272-6799. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Charles E Anya/
Examiner, Art Unit 2194